DEPARTMENT of ENVIRONMENTAL SERVICES Water Supply & Pollution Control Division — Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: CUMMINGS MEADOW		17.16
Town: JAFFREY	Maximum depth (m):	1.8
County: Cheshire		0.6
River Basin: Merrimack	Volume (m³): 10	0008
Latitude: 42°49'30" N	Relative depth:	0.4
Longitude: 72°05′50″ W	Shore configuration:	1.43
Elevation (ft): 1220		1.92
Shore length (m): 2100	Flushing rate (yr ⁻¹):	3.20
Watershed area (ha): 54.4	P retention coeff.:	0.82
% watershed ponded: 0.0	Lake type: artif:	icial

BIOLOGICAL:	26 February 1990	6 September 1989
DOM. PHYTOPLANKTON (% TOTAL) #	NO PLANKTON SAMPLES	NO SAMPLE COLLECTED
#:	COLLECTED; TOO SHALLOW	
#	B & WEEDY	
PHYTOPLANKTON ABUNDANCE (cells/mL)		1620.0
CHLOROPHYLL—A (µg/L)		8.53
DOM. ZOOPLANKTON (% TOTAL) #	1	NO SAMPLE COLLECTED
#	2	
: #	3	
ROTIFERS/LITER	0	0
MICROCRUSTACEA/LITER	. 0	0
ZOOPLANKTON ABUNDANCE (#/L)	0	0
VASCULAR PLANT ABUNDANCE		Abundant
SECCHI DISK TRANSPARENCY (m)		1.2 Visible on bottom
BOTTOM DISSOLVED OXYGEN (mg/L)	11.6	8.9
BACTERIA (fecal col., #/100 ml) #	1	
#	2	
#	3	

SUMMER THERMAL STRATIFICATION:

not stratified

Depth of thermocline (m): None Hypolimnian valume (m³): None

CHEMICAL: Lake: CUMMINGS MEADOW Town: JAFFREY 26 February 1990 6 September 1989 DEPTH (m) 1.0 1.0 pH (units) 5.6 6.2 A.N.C. (Alkalinity) 2.0 3.0 NITRATE NITROGEN 0.18 < 0.05 0.44 TOTAL KJELDAHL NITROGEN 0.76 TOTAL PHOSPHORUS 0.022 0.019 CONDUCTIVITY (p mhos/cm) 79.0 78.0 APPARENT COLOR (cpu) 28 88 MAGNESIUM 0.66 CALCIUM 2.5 SODIUM 11.0 **POTASSIUM** 0.70 CHLORIDE 16 16 SULFATE 6 TN : TP 28 40

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1989

CALCITE SATURATION INDEX

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	3	5	2	10	Eutro.

4.2

COMMENTS:

- 1. It was not possible to use the fathometer to sound the pond because of the shallowness and weediness of the pond. Scattered soundings were taken. The pond was generally 4 to 5 feet deep throughout with a maximum depth of 6 feet.
- 2. Land was posted on one side of the small dam.
- 3. Small flagellates (80%) dominated the whole-water phytoplankton.

Cummings Meadow



FIELD DATA SHEET

LAKE: CUMMINGS MEADOW

DATE: 09/06/89

TOWN: JAFFREY WEATHER: SUNNY & WARM

DEDTU	TEMP	*DICCOLUED	OVVCEN
DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
0.1	20.5	8.8	95 %
1.0	18.0	8.9	92 %
	`		

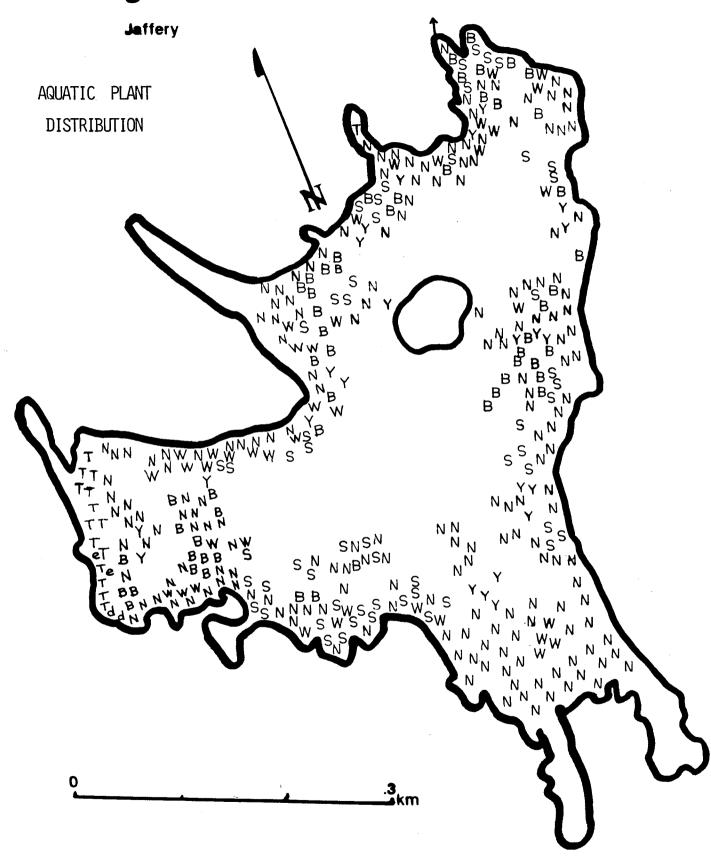
SECCHI DISK (m): 1.2 VOB COMMENTS:

BOTTOM DEPTH (m): 1.2

TIME: 1331

*Dissolved oxygen values are in mg/L

Cummings Meadow



	AQUATIC PLANT SURVEY				
LAKE: CUMMINGS MEADOW		TOWN: JAFFREY	DATE: 09/06/89		
PLANT Key		LANT NAME	ADUNDANCE		
Rey	GENERIC	COMMON	ABUNDANCE		
N	Nymphaea	White water lily	Common		
В	Brasenia schreberi	Water shield	Common		
S	Sparganium	Bur reed	Common		
Υ	Nuphar	Yellow water lily	Scattered		
W	Potamogeton	Pondweed	Common		
е	Eleocharis	Spike rush	Sparse		
d	Dulichium arundinaceum	Three-way sedge	Sparse		
Т	Typha	Cattail	Sparse		

OVERALL ABUNDANCE: Abundant

GENERAL OBSERVATIONS:

1. A very shallow, weedy pond. Bladderwort was also scattered throughout the pond amongst the other plants. It was not mapped because of the abundance of the other plants.